

DERWENT-ACC-NO: 1996-027658

DERWENT-WEEK: 199603

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TITLE: Non-aq. electrolyte battery - has negative electrode
coated with lithium fluoride on its surface

PATENT-ASSIGNEE: NIPPONDENSO CO LTD[NPDE]

PRIORITY-DATA: 1994JP-0114682 (April 28, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 07302617 A	November 14, 1995	N/A	006	H01M 010/40

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 07302617A	N/A	1994JP-0114682	April 28, 1994

INT-CL (IPC): H01M004/02, H01M004/04, H01M010/40

ABSTRACTED-PUB-NO: JP 07302617A

BASIC-ABSTRACT:

The battery (1) consists of a non-aqueous electrolyte (14), a negative electrode (12) and a positive electrode (11). A separator (13) is set up between the two electrodes. The whole arrangement is enclosed by a battery receptacle (15). The positive electrode emits lithium. The surface of negative electrode is coated with lithium fluoride as active material. The surface of negative electrode is made to react with water. The negative electrode is again made to react with hydrogen fluoride to form a coating of lithium fluoride on the surface of the negative electrode.

ADVANTAGE - Size and weight of battery is decreased and capacity and lifetime of battery are increased. Cost of battery is reduced and charging and discharging cycle characteristics are improved.

CHOSEN-DRAWING: Dwg.1/4

TITLE-TERMS: NON AQUEOUS ELECTROLYTIC BATTERY NEGATIVE ELECTRODE
COATING

LITHIUM FLUORIDE SURFACE

DERWENT-CLASS: L03 X16

CPI-CODES: L03-E01B5;

EPI-CODES: X16-B01F1; X16-E01C;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1712S; 1816S

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1996-009540

Non-CPI Secondary Accession Numbers: N1996-023422

DERWENT-ACC-NO: 1996-490681

DERWENT-WEEK: 199649

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TITLE: Mfg. lithium secondary battery cathode with high capacity - includes leaving lithium@ or lithium@-aluminium@ alloy metal foil in argon or nitrogen@ gas contg. some hydrogen fluoride or chloride

PATENT-ASSIGNEE: TOSHIBA BATTERY CO LTD[RAYN]

PRIORITY-DATA: 1995JP-0051084 (March 10, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08250108 A	September 27, 1996	N/A	006	H01M 004/04

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 08250108A	N/A	1995JP-0051084	March 10, 1995

INT-CL (IPC): H01M004/02, H01M004/04 , H01M010/40

ABSTRACTED-PUB-NO: JP 08250108A

BASIC-ABSTRACT:

Mfg. lithium secondary battery cathode includes leaving a metal foil of metal lithium or lithium-aluminium alloy in Ar or gas having a small quantity of dil. hydrogen fluoride, or hydrogen chloride to form a lithium fluoride film, or lithium chloride film on the surface of the metal foil.

ADVANTAGE - Provides high capacity, high charging efficiency, and high storing durability.

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: MANUFACTURE LITHIUM SECONDARY BATTERY CATHODE HIGH CAPACITY LEAVE

LITHIUM@ LITHIUM@ ALUMINIUM@ ALLOY METAL FOIL ARGON NITROGEN@ GAS
CONTAIN HYDROGEN FLUORIDE CHLORIDE

DERWENT-CLASS: L03 X16

CPI-CODES: L03-E01B5;

EPI-CODES: X16-E08A;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1704U; 1712U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1996-153369

Non-CPI Secondary Accession Numbers: N1996-413603

PAT-NO: JP408250108A

DOCUMENT-IDENTIFIER: JP 08250108 A

TITLE: MANUFACTURE OF NEGATIVE ELECTRODE FOR LITHIUM SECONDARY BATTERY, AND LITHIUM SECONDARY BATTERY

PUBN-DATE: September 27, 1996

INVENTOR-INFORMATION:

NAME

KATSUMATA, TOMOO

ASSIGNEE-INFORMATION:

NAME

TOSHIBA BATTERY CO LTD

COUNTRY

N/A

APPL-NO: JP07051084

APPL-DATE: March 10, 1995

INT-CL (IPC): H01M004/04, H01M004/02, H01M010/40

ABSTRACT:

PURPOSE: To provide a method for manufacturing a more practical negative electrode for lithium secondary battery with high capacity and low degree of storage deterioration, and a lithium secondary battery having this negative electrode.

CONSTITUTION: A metal foil consisting of metal lithium or lithium-aluminum alloy which constitutes a negative electrode is left under an argon gas atmosphere containing a small amount of hydrogen fluoride or hydrogen chloride to form a lithium fluoride film or lithium chloride film on the metal foil surface. A lithium secondary battery has a positive electrode 3, a negative electrode 7 having lithium or lithium-aluminum alloy as negative electrode active material, and a lithium ion conductive electrolyte, and the negative electrode active material has a thin lithium fluoride or lithium chloride film and also a hydrogen fluoride or hydrogen chloride film 100-1000nm in thickness formed on the surface.

Lithium Fluoride film

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